ABSTRACT

The present invention provides a method of detecting a biological agent including contacting a sample with a sensor including a polymer system capable of having an alterable measurable property from the group of luminescence, anisotropy, redox potential and uv/vis absorption, the polymer system including an ionic conjugated polymer and an electronically inert polyelectrolyte having a biological agent recognition element bound thereto, the electronically inert polyelectrolyte adapted for undergoing a conformational structural change upon exposure to a biological agent having affinity for binding to the recognition element bound to the electronically inert polyelectrolyte, and, detecting the detectable change in the alterable measurable property. A chemical moiety being the reaction product of (i) a polyelectrolyte monomer and (ii) a biological agent recognition element -substituted polyelectrolyte monomer is also provided.